PTO/SB/08A (08-03) Approved for use through 07/31/2006. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OM8 control number.

Substitute for form 1449/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1

Complete if Known			
Application Number	10/762,181		
Filing Date	January 21, 2004		
First Named Inventor	Mohklesi		
Art Unit			
Examiner Name			
Attorney Docket Number	SAND-01021US0		

			U. S. PATEN	T DOCUMENTS	
Examiner Initials*	Cite No.	Document Number  Number-Kind Code <sup>2 (f known)</sup>	Publication Date MM-D0-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	<b>-</b>	US- 5,043,940	8/27/1991	Harari	
	<b>†</b>	<sup>US-</sup> 5,095,344	3/10/1992	Harari	
		US- 5,172,338	12/15/1992	Mehrotra et al.	
		US- 5,343,063	8/30/1994	Yuan et al.	
		<sup>US-</sup> 5,570,315	10/29/1996	Tanaka et al.	
		<sup>US-</sup> 5,677,872	10/14/1997	Samachisa et al.	
١		US- 5,774,397	6/30/1998	Endoh et al.	
•		US- 5,867,429	2/2/1999	Chen et al.	
		<sup>US-</sup> 5,877,980	2/2/1999	Mang et al.	
	1	<sup>US-</sup> 5,890,192	3/30/1999	Lee et al.	
	Î	<sup>US-</sup> 5,930,167	7/27/1999	Lee et al.	
• .		US- 5,936,887	8/10/1999	Choi et al.	
-		<sup>US-</sup> 5,990,514	11/23/1999	Choi et al.	
		US- 6,044,017	3/28/2000	Lee et al.	
		US- 6,046,935	4/4/2000	Takeuchi et al.	
		US- 6,093,605	7/25/2000	Mang et al.	
		US- 6,103,573	8/15/2000	Harari et al.	
		US-6,121,654	9/19/2000	Likharev	
		<sup>US-</sup> 6,151,248	11/21/2000	Harari et al.	

	FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No.	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Peges, Columns, Lines, Where Relevant Passages	-0		
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (# known)	MM-DD-YYYY		Or Relevant Figures Appear	۳		
<del></del>								
	ļ					$\vdash$		
	-		<del></del>					

Examiner	Date	
Signature	Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

Translation is attached.

This collection of Information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the Individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

Attorney Docket Number | SAND-01021US0

Under the Paperwork Reduction Act of 1995, no persons are required to	respond to a collection of Inform	nation unless it contains a valid OMB control number.
Substitute for form 1449/PTO	Co	omplete if Known
CONTRACTOR CONTRACTOR	Application Number	10/762,181
INFORMATION DICCI OCUDE	Filing Date	January 21, 2004
INFORMATION DISCLOSURE	First Named Inventor	Mohklesi
STATEMENT BY APPLICANT	Art Unit	
(Use as many sheets as necessary)	Examiner Name	

Sheet 2

of 4

Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where
Initials*	No.1	Number-Kind Code <sup>2 (f known)</sup>	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
		US- 6222762	4/24/2001	Guterman et al.	
		<sup>US-</sup> 6246607	6/12/2001	Mang et al.	
		<sup>US-</sup> 6461905	10/8/2002	Wang et al.	
		<sup>US-</sup> 6617639	9/9/2003	Wang et al.	
		<sup>US-</sup> 6642066	11/4/2003	Halliyal et al.	
		US- 2003/0002348	1/2/2003	Chen et al.	
		US·			
		US-			
	-	US-			
		US-			
		US-			
		US-			
	<b>—</b>	US-			

		FORE	IGN PATENT DOCU	MENTS		
Examiner Initials*	Cite No.	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	
		Country Code <sup>3</sup> "Number <sup>4</sup> "Kind Code <sup>8</sup> (# known)	MM-DD-YYYY		Or Relevant Figures Appear	T
	<u> </u>					┝
	-					t
	<del>                                     </del>					
	1					

Examiner	Date	
Signature	Considered	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English language Translation is attached.

Translation is attached.

This collection of information is required by 97 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

PTO/SB/088 (08-03)

Under the Paperwork Reduction Act or 1995, no persons are	Complete if Known	~
Indee the Benegued Reduction 6 of 4005, as a series are	required to respond to a collection of information unless it contains a valid OMB control number	
	U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERC	~-
	Approved for use through 07/31/2006, OMB 0651-00	31

	Substitute for form 1449/PTO		Complete if Known		
Substitu	ILB IOF IOHII 1445/FTC			Application Number	10/762,181
INF	ORMATIO	N DIS	SCLOSURE	Filing Date	January 21, 2004
STA	TEMENT	BY A	PPLICANT	First Named Inventor	Mohklesi
				Art Unit	
	(Use as many s	neets as i	necessary)	Examiner Name	
Sheet	3	of	4	Attorney Docket Number	SAND-01021US0

Examiner	Cite	NON PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of	
initials*	No.1	the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Ls
	<i>i</i>	BORSON, et al., "Direct Measurement of the Energy Distribution of Hot Electrons in Silicon Dioxide," J. Appl. Phys., Vol. 58, No. 3.1, August 1985, pp. 1302-1313	
	•	BROWN, et al., "Nonvolatile Semiconductor Memory Technology, A Comprehensive Guide to Understanding and Using NVSM Devices," IEEE, pp. 198-200	
	,	CAMM, et al., "Engineering Ultra-Shallow Junctions Using fRTP™," IEEE, Vortek Industries Limited, 2002	
	,	CHAN, et al., "A True Single-Transistor Oxide-Nitride-Oxide EEPROM Device," IEEE Electron Device Letters, Vol. EDL-8, No. 3, March 1987, pp. 93-95	
	•	CHOI, et al., "A Novel Booster Plate Technology in High Density NAND Flash Memorles for Voltage Scaling-Down and Zero Program Disturbance," IEEE Symposium on VLSI Technology Digest of Technical Papers, 1996, pp. 238-239	
		CHOI, et al., "A Triple Polysilicon Stacked Flash Memory Cell With Wordline Self-Boosting Programming", IEEE, 1997, pp. 283-286	
	1	DIJKSTRA, et al., "ISSG RTO (In-situ Steam Generation Rapid Thermal Oxidation) Grown Tunnel Oxide for Improved Reliability of Flash Memories," Philips Semiconductors, pp. 85-86	
		DiMARIA, "Graded or Stepped Energy Band-Gap-Insulator MIS Structures (GI-MIS or SI-MIS)," American Institute of Physics, September 1979, pp. 5826-5828	
,	-	DiMARIA, et al., "Dual-Electron-Injector-Structure Electrically Alterable Read-Only-Memory Modeling Studies," IEEE Transactions on Electron Devices, Vol. ED-28, No. 9, September 1981, pp. 1047-1053	
•	•	DiMARIA, et al., "Electrically-Alterable Memory Using A Dual Electron Injector Structure," IEEE Electron Device Letters, Vol. EDL-1, No. 9, September 1980, pp. 179-180	

Examiner	Date
Signature	Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of Information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application from to the USPTO. Time will vary depending upon the inchidual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/088 (08-03) Approved for use through 07/31/2006, OMB 0651-0031

mark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are Substitute for form 1449/PTO				re required to respond to a collection of information unless it contains a valid OMB control number.  Complete if Known		
Substitut	e tor lorni 1448/PTO			Application Number	10/762,181	
INFO	DRMATION	DIS	CLOSURE	Filing Date	January 21, 2004	
STA	TEMENT E	BY A	PPLICANT	First Named Inventor	Mohklesi	
				Art Unit		
(Use as many sheets as necessary)				Examiner Name		
Sheet	4	of	5	Attorney Docket Number	SAND-01021US0	

. 4

Examiner	Cite	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of	
Initials*	No.1	the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		DiMARIA, et al., "Extended Cyclability in Electrically-Alterable Read-Only-Memories," IEEE ELECTRON DEVICE LETTERS, VOL. EDL-3, NO. 7, July 1982, pp. 191-195	
		HIRAYAMA, et al., "Low-Temperature Growth of High-Integrity Silicon Oxide Films by Oxygen Radical Generated in High-Density Krypton Plasma," IEEE, 1999, pp. 10.3.1-10.3.4	
		KIM, et al., "Fast Parallel Programming of Multi-Level NAND Flash Memory Cells Using the Booster-Line Technology", Symposium on VLSI Technology Digest of Technical Papers, 1997, pp. 65-66	
		KONSTANTIN, et al. *Riding the Crest of a New Wave in Memory, NOVORAM: A new Concept for Fast, Bit-Addressable Nonvolatile Memory Based on Crested Barriers,* Circuits and Devices, July 2000, p. 17	
•		KOTECHA, et al., "WAM 3.2: A Dual-Gate Floating Gate FET Device," IEEE International Solid-State Circuits Conference, 1981, pp. 38-39	
		KOROTKOV, et al., "Resonant Fowler-Nordheim Tunneling through Layered Tunnel Barriers and its Possible Applications," 1999 IEEE, 0-7803-5413-3/99	
		LEE, et. al., "Effects of Floating Gate Interference on NAND Flash Memory Cell Operation," IEEE Electron Device Letters, Vol. 23, No. 5, May 2002, p. 264	
		NOZAKI, et al., "A 1-Mb EEPROM With NONOS Memory Cell for Semiconductor Disk Application," IEEE Journal of Solid-State Circuits, Vol. 26, No. 4, April 1991, pp. 497-501	
		OHMI, et al., "New Paradigm of Silicon Technology," Proceedings of the IEEE, Vol. 89, No. 3, March 2001, pp. 394-412	
		OHTSUBO, et al., "Low Temperature Growth (400"C) of High-Integrity Thin Silicon-Oxynitride Films by Microwave-Excited high-Density Kr/O2/NH3 Plasma," pp. 166-169	

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, Including gathering, preparing, and submitting the completed application from to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/08B (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Complete if Known Substitute for form 1449/PTO **Application Number** 10/762,181 Filing Date INFORMATION DISCLOSURE January 21, 2004 STATEMENT BY APPLICANT First Named Inventor Mohklesi Art Unit (Use as many sheets as necessary) **Examiner Name Attorney Docket Number** SAND-01021US0 Sheet 5 5

Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		SATOH, et al., "A Novel Channel Boost Capacitance (CBC) Cell Technology with Low Program Disturbance Suitable for Fast Programming 4Gbit NAND Flash Memories", IEEE Symposium on VLSI Technology Digest of Technical Papers, 1998, pp. 108-109	
		SATOH, et al., "A Novel Gate-Offset NAND Cell (GOC-NAND) Technology Suitable for High-Density and Low-Voltage-Operation Flash Memories," Technical Digest of 1999 IEDM, section 11, number 2, p. 275	
		SEIDEL, et al., "Progress and Challenges for ALD Applications," Genus, Inc., August 5, 2003, pp. 1-39	
		SEKINE, et al., "Highly Reliable Ultrathin Silicon Oxide Film Formation at Low Temperature by Oxygen Radical Generated in High Density Krypton Plasma," IEEE Transactions on Electron Devices, Vol. 48, No. 8, August 2001, pp. 1550-1555	
		SUH, et al., "A 3.3V 32 Mb NAND Flash Memory With Incremental Step Pulse Programming Scheme," IEEE international Solid-State Circuits Conference, Digest of Technical Papers, February 1995, pp. 94-95, 305-306, 128-129, and 350	
		YU, et al., "Energy gap and band alignment for (HfO2)x(Al2O3)1-x on (100) Si," Applied Physics Letters, Volume 81, Number 2, July 8, 2002, pp. 376-378	
			٠
		·	

Examiner	Date
Signature	Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.
This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.